DESIGN PANEL NO. 39 11-13-97

DATA DISTRIBUTION & PROCESSING CSCI CONSTRAINT MANAGER - Julie Silva

OVERVIEW

The Constraint Manager (CMGR) CSC provides the capability to monitor one or more FDs for a predetermined condition and notify personnel operating the Test Set, and software applications executing within the Test Set, that the monitored data has transition into or out of the constraint condition.

ACTIONS	ACTIONEE	DUE DATE	STATUS
• The validity of Constraint Manager Requirement 1.2.2.1 b, c, d, g, h, with respect to their implementation in Thor and future deliveries is in question and will be clarified by the Design Panel 3 timeframe.	Julie Silva Brian Bateman John Wilkinson Robert Pierce		
• Constraint Management interfaces - requires clarification with respect to CCWS and CCP.			

*Approved

DATA DISTRIBUTION & PROCESSING CSCI DATA FUSION CSC - Julie Silva

OVERVIEW

The Data Fusion CSC resides in the DDP. Data Fusion provides the capability of running system fusion algorithms to read FD data from Data Distribution via Application Services and perform algorithms based on FD measurement values and constants. All inputs will be based on queued change values.

The majority of the Data Fusion work involves off-line scripts to generate algorithms templates, validate algorithms inputs/outputs, and build runtime executables.

The Data Fusion focuses on providing a comprehensive solution to performing data fusion. Requirements and statement of work items pertain to system fusion, but, in some instances may also be applied to pseudo FDs. It is the intent of the Data Fusion Completion Thread to examine pseudo calculations as well as system fusion. Many of the scripts created for system data fusion may also be reused for pseudo calculations.

Data Fusion algorithms will run on the DDP and will be started by Autopilot via System Control. Algorithms will run at either a "high" or "normal" priority.

System Viewers will display fusion information and will run on the CCWS. The viewers will retrieve the algorithm description, inputs, and output from the DDP application interface functions. The viewer will also interface with Application Services to retrieve the current fused data value.

ACTIONS	ACTIONEE	DUE DATE	STATUS

No Actions required

*Approved

APPLICATION SERVICES SUB-SYSTEM SERVICES - Jim Leondyke

OVERVIEW

Sub-system Services (SSS) is a CSC in Application Services (ASV). SSS consist of three parts, Ground Support Equipment (GSE) Application Services (GAS), On-board Services (OBS), and Non-gateway Services (NGS). GAS will be the interface for user applications to command Function Designators (FDs) and non-FDs to/from a GSE gateway. OBS will interface the commands for user applications for FDs and non-FDs from the Launch Data Bus (LDB) and Pulse Code Modulation (PCM) up-link and down-link gateways. Non-gateway Services will interface with commands that have a destination not associated with a gateway. This includes setting time FDs, health of an FD, constraints, etc..

ACTIONS	ACTIONEE	DUE DATE	STATUS

No Action required

*Approved

CLCS DBSAFE - Jerry Murr

OVERVIEW

CLCS DBSAFE is a comprehensive Checkout and Launch Control System (CLCS) software capability that provides an interactive user interface supporting the evaluation, incorporation, and historical tracking of engineering changes to the FD Database. DBSAFE for CLCS is ported code baselined from the DBSAFE software developed for the replatform of CCMS Support Software to the Shuttle Data Center (SDC).

The core purpose of the CLCS DBSAFE is to provide the capability to maintain the FD Database. The FD Database is the portion of the CLCS DBSAFE database that contains the information on the measurements, commands, and system parameters needed for CLCS. The attributes of measurements and commands for the orbiters, payloads, ground support equipment, etc., are collected from the various design agencies, processed into a format that is compatible with CLCS, and stored in the FD Database using CLCS DBSAFE software. The data is then available to support the CLCS Application S/W Development Environment and Test Build processes.

CLCS DBSAFE also provides the capability to create and maintain TCID build specifications for the FD Directory Build process. CLCS DBSAFE validates and stores user specifications in the CLCS DBSAFE database. CLCS DBSAFE facilitates the generation of TCID specifications by automating the following functions:

- Assignment and traceability of Vehicle Configuration Names (VCN) and formats to Test Configuration Identifiers (TCID) based on a list of engineering provided by Ground Software Integration (GSI)
- Assignment of projected VCNs and formats to TCIDs based on matching each mission/TCID configuration to the effectivities of engineering changes in the FD Database
- Assignment and traceability of format revisions to each mission/TCID based on the format engineering defined in the Shuttle Data Tape (SDT)
- Support elimination of invalid/duplicate/overlapping addressing in the FD Database, that would otherwise cause errors in a TCID build

ACTIONS	ACTIONEE	DUE DATE	STATUS

No Action required

*Approved

ROBUST CAP WEB INTERFACE (RCWI) - Ed Mangham

OVERVIEW

The *Robust CAP Web Interface (RCWI)* supports the Graphical User Interface (GUI) development for the CAP 104, 134, 135, 145, 113, 136, 142 applications which run on the SDC. The GUI will provide access to the *Computer Application Programs (*CAP) via the *Business And Support Information Service (BASIS)* on the *Checkout and Launch Control System* (CLCS) or an office workstation running a Web browser. CAP 104, 134, 135, 145, 113, 136 and 142 are the initial CAP applications to be converted, others will follow after Thor. CAP 104, 134, 135 and 145 were developed and released as a pathfinder for Redstone. These CAPs will be enhanced for Thor while CAP 113, 136 and 142 will be new for Thor.

ACTIONS	**ACTIONEE**	**DUE DATE**	**STATUS**

No Action required

*Approved

ADVANCED DATA ANALYSIS TOOL (ADAT) - Mike Dalton

OVERVIEW

The Advanced Data Analysis Tool (ADAT) will provide a platform independent Web based Data Analysis capability for plotting and analyzing data. The ADAT Graphical User Interface (GUI) will be available on the Checkout and Launch Control System (CLCS) Support Workstation or a NASA center office workstation running a Web browser (e.g., Netscape's Navigator, Microsoft's Internet Explorer). The first release of the ADAT software will be new for Thor.

The ADAT Java language based applet(s) will provide users access to data retrieved via a Data Server on the Shuttle Data Center (SDC). The ADAT applet classes will reside on a SDC Web server and will be executed from a browser HTML instruction on the CLCS Support Workstation in the OCR or from an office workstation.

ACTIONS	**ACTIONEE**	**DUE DATE**	**STATUS**

No Action required

*Approved

RETRIEVED DATA PRESENTATION (RDP) - Tom Beever

OVERVIEW

The Retrieved Data Presentation (RDP) establishes the framework for CLCS data retrieval. The retrievals are similar in functionality to those retrievals that reside on the PDR/SPA in CCMS. The programs are composed of two sets of programs executing in al client/server relationship. The "Client" programs may reside in either a Business and Support Information Service (BASIS) CLCS Support Workstation, or in an Office Workstation. The "Client" programs provide a Graphical User Interface (GUI) to the server on the SDC. The "Client" programs are written in Java and are executed under a Web Browser on the workstation.

ACTIONS	**ACTIONEE**	**DUE DATE**	**STATUS**
No Action required			

*Approved